

Figure 1

DSP-12, 1656 Base Pairs

AAGCAGTGGTAACAACGCAGAGTACGCGGGCGAGGAGAATATCTTGCTGGGAGTGGACT
TTTCCAGTAAGGAAAGTAAAAGCTGCACCATTGGG**ATGGT**TCTCCGACTGTGGAGCGAC
ACGAAAATCCACCTTGATGGAGATGGTGGGTTCAGCGTGAGCACAGCAGGAAGGATGCA
CATATTTAAGCCTGTGTCTGTCCAGGCCATGTGGTCTGCCCTGCAGGTGCTTCACAAGG
CCTGCGAAGTGGCCCGGAGGCACAACACTTCCCCGGGGGTGTAGCTCTCATCTGGGCT
ACCTACTATGAGAGCTGCATCAGCTCCGAGCAGAGCTGCATCAACGAGTGGAACGCCAT
GCAGGACCTGGAGTCTACGCGGGCCGACTCCCCCGCGCTATTTGTGGACAAGCCCCTG
AAGGGGAAAGGACCGAGCGCCTCATCAAAGCCAAGCTCCGAAGCATCATGATGAGCCAG
GATCTAGAAAATGTGACTTCCAAAGAGATTTCGTAATGAATTAGAGAAACAGATGAATTG
TAACTTGAAGGAACCAAGGAATTTATAGACAATGAGATGCTACTTATCTTGGGACAGA
TGGACAAGCCCTCCCTTATCTTCGATCATCTTTATCTCGGCTCTGAATGGAATGCATCC
AATCTGGAGGAAGTGCAGGGCTCAGGGGTTGATTACATTTTAAATGTTACCAGAGAAAT
CGATAATTTTTTTTCTGGCTTATTTGCATATCATAACATCCGAGTCTACGATGAAGAGA
CCACAGACCTCCTCGCCCACTGGAATGAAGCGTATCATTTTATAAACAAGCGAAGAGG
AACCATTCCAAGTGCCTGGTGCATTGCAAAATGGGCGTGAGTCGCTCGGCCTCCACAGT
CATAGCCTATGCAATGAAGGAATTCGGCTGGCCTCTGGAAAAAGCATATAACTATGTAA
AGCAGAAGCGCAGCATCACGCGCCCCAACGCGGGCTTTATGAGGCAGCTGTCTGAGTAT
GAAGGCATCTTGATGCAAGCAAACAGCGGCACAACAAGCTGTGGCGTCAGCAGACAGA
CAGCAGCCTCCAGCAGCCTGTGGATGACCCTGCAGGACCTGGCGACTTCTTGCCAGAGA
CCCCAGATGGCACCCCGGAAAGCCAGCTGCCCTTCTTGATGATGCCGCCAGCCCGGC
TTAGGGCCCCCTCCCTGCTGTTTCCGGCGACTCTCAGACCCCTTCTGCCTTCCCC
TGAGGATGAAGCCGGCAGCTTGGTCCACCTGGAGGATCCGGAGAGGGAGGCTCTGTTGG
AGGAAGCTGCTCCACCTGCAGAGGTGCACAGGCCGGCCAGACAGCCCCAGCAAGGTTCC
GGACTCTGTGAGAAGGATGTGAAGAAGAACTAGAGTTTGGGAGTCCCAAAGGTCGGAG
CGGCTCCTTGCTGCAGGTGGAGGAGACGGAAAGGGAGGAGGGCCTGGGAGCAGGGAGGT
GGGGGCAGCTTCCAACCCAGCTCGATCAAAACCTGCTCAACTCGGAGAACCTAAACAAC
AACAGCAAGAGGAGCTGTCCAACGGCATGGAGGTAGGCAGAGCCCGGCCTGCAGGGTG
GCACACCCCATCCCTTCCATCCCACTCTAATTGGCCTACCTCAGCCTCTGTAGTAGGGA
CTACAGGCACCCGCCACCCACCCAGCTGATTTTTTTCTATTGTCTCCTCTGGGCCCCC
AGCTCCCATCTCCAGGGACCTGAGGGTTCTTTCACAGGGT**GA**TTCTGCTGGTGGGTACG
TAGTGCATACCTTATATAGCAAATTGAGAATCTGTTGGGAATAACACATATCTCTGCAC
ACCATCTTCACCCCATGTACCTTATTCATACCCTGGGCAGGGCTTCCAACCTCAATTTCT
TTTTGTGTATGTAAAATTAAAACATATAATTTATCAGCCAAAAAAAAAAAAAAAAAAAA
AA

Figure 2

DSP-12, 552 Amino Acids

MVLRLWSDTKIHLDDGGGFSVSTAGRMHIFKPVSVMWSALQVLHKACEVARRHNYFP
GGVALIWATYYESCISSEQSCINEWNAMQDLESTRPDSPALFVDKPTGERTERLIKAK
LRSIMMSQDLENVTSKEIRNELEKQMNCNLKELKEFIDNEMLLILGQMDKPSLIFDHLY
LGSEWNASNLEELQGGVDYILNVTREIDNFFPGLFAYHNIRVYDEETDLLAHWNEAY
HFINKAKRNHSHKCL**VHCKMGVSR**SASTVIAYAMKEFGWPLEKAYNYVKQKRSITRPNAG
FMRQLSEYEGILDASKQRHNKLWRQQTDSLSQQPVDDPAGPGDFLPETPDGTPESQLPF
LDDAAQPGGLGPPLPCCFRRLSDPLLSPPEDEAGSLVHLEDPEREALLEEAAPPAEVHRP
ARQPQQGSGLCCKDVKKKLEFGSPKGRSGSLQVEETEREEGLGAGRWGQLPTQLDQNL
LNSENLNNNSKRSCPNGMEVGRARPAGWHTPSLPSHSNWPTSASVVGGTTGTRHHTQLIF
FYCLLWAPSSHLQGPEGSFTG

Figure 3

DSP-13, 1527 Base Pairs

CCTGGGAAGAAGTTATCTATCTCTCGAGTGACATTCAAGATATACCGTACCCCTCGGTTCTGTA
AGTCCTCTAAGTTGGAGGCATTCCATTCTGAGCCGGGCCCC**ATG**ACCCTGAGCACGTTGGCCCCGC
AAGAGGAAGGCGCCCCCTCGCTTGCACCTGCAGCCTCGGTGGCCCCGACATGATTCCTTACTTCT
CCGCCAACGCGGTTCATCTCGCAGAACGCCATCAACCAGCTCATCAGCGAGAGCTTTCTAACTGT
CAAAGGTGCTGCCCTTTTTCTACCACGGGGAAATGGCTCATCCACACCAAGAATCAGCCACAGA
CGGAACAAGCATGCAGGCGATCTCCAACAGCATCTCCAAGCAATGTTCAATTTTACTCCGCCCAG
AAGACAACATCAGGCTGGCTGTAAGACTGGAAAGTACTTACCAGAATCGAACACGCTATATGGT
AGTGGTTTTCAACTAATGGTAGACAAGACACTGAAGAAAGCATCGTCCTAGGAATGGATTTCTCC
TCTAATGACAGTAGCACTTGTACCATGGGCTTAGTTTTGCCTCTCTGGAGCGACACGCTAATTC
ATTTGGATGGTGATGGTGGGTTCAGTGTATCGACGGATAACAGAGTTCACATATTCAAACCTGT
ATCTGTGCAGGCAATGTGGTCTGCACTACAGAGCTTACACAAGGCTTGTGAAGTCGCCAGAGCG
CATAACTACTACCCAGGCAGCCTATTTCTCACTGGGTGAGTTATTATGAGAGCCATATCAACT
CAGATCAATCCTCAGTCAATGAATGGAATGCAATGCAAGATGTACAGTCCCACCGGCCCCGACTC
TCCAGCTCTCTTCACCGACATACCTACTGAACGTGAACGAACAGAAAGGCTAATTTAAACCCAAA
TTAAGGGAGATCATGATGCAGAAGGATTGGAGAATATTACATCCAAAGAGATAAGAACAGAGT
TGGAAATGCAAATGGTGTGCAACTTGCGGGAATTCAGGAATTTATAGACAATGAAATGATAGT
GATCCTTGGTCAAATGGATAGCCCTACACAGATATTTGAGCATGTGTTCCCTGGGCTCAGAATGG
AATGCCTCCAACCTTAGAGGACTTACAGAACCGAGGGGTACGGTATATCTTGAATGTCACTCGAG
AGATAGATAACTTCTTCCCAGGAGTCTTTGAGTATCATAACATTCGGGTATATGATGAAGAGGC
AACGGATCTCCTGGCGTACTGGAATGACACTTACAAATTCATCTCTAAAGCAAAGAAACATGGA
TCTAAATGCCTTGTGCACTGCAAAATGGGGGTGAGTCGCTCAGCCTCCACCGTGATTGCCTATG
CAATGAAGGAATATGGCTGGAATCTGGACCGAGCCTATGACTATGTGAAAGAAAGACGAACGGT
AACCAAGCCCAACCCAAGCTTCATGAGACAACTGGAAGAGTATCAGGGGATCTTGCTGGCAAGC
TTCCTAGGCTTGATTCATGGAGGGAGGGACAAGCCCTGGGGAGAGAAAAGCACAGAATTTGAGT
CAGTAGATCTGGTTTCCATTCTGGTTACCCCTCTTGCTGCAACCCTGAGAAGTTACTTCACAT
TTCTCATCCTTACCTGACCCCATCTATAAA**TG**AAATCAAGAGATCCATCTCACAGGGTTATT
GTGAATAAAATGTGTTTGAATGTTTATAAAAAAAAAAAAAAAAAAAAA

Figure 4

DSP-13, 509 Amino Acids

MTLSTLARKRKAPLACTCSLGGPDMIPYFSANAVISQNAINQLISESFLT VKGAALFLPRGN
STPRISHRRNKHAGDLQOHLQAMFILLRPEDNIRLAVRLESTYQNRTRYMVVVSTNGRQDTEES
IVLGMDFSSNDSSTCTMGLVLPLWSDTLIHL DGGGFSVSTDNRVHIFKPVS VQAMWSALQSLH
KACEVARAHNYYPGSLFTWVSYYESHINS DQSSVNEWNAMQDVQSHRPDSPALFTDIPTERER
TERLIKTKLREIMMQDLENITSKEIRTELEMQMVCNLREFKEFIDNEMIVILGQMDSPTQIFE
HVFLGSEWNASNLEDLQNRGVRYIILNVTREIDNFFPGVF EYHNIRVYDEEATDLLAYWNDTYKF
ISKAKKHGSKCL**VHCKMGVSR**SASTVIAYAMKEYGWNLD RAYDYVKERRTVTKPNPSFMRQLEE
YQGILLASFLGLIHGGRDKPWGEKSTEFESVDLVSIPGSPSCCNPEKLLHISHPYLTPSIK

Figure 5

A DSP13 Alternate Splice Variant, 723 Base Pairs

CTGCCCCGGCTTCTAACAGGCCACTGACCGGTACTCACTGGGGACCCACGCTCTAAGTTGTTGAT
CTCTAGAACCGATTTTGGAAAAGGATTTGCCTTATTGAAGAAGACAGGATCATTCTTCTTTCTT
TCCCATTTAAGAATAATCGTTATTAAGAATATCGTTTAAGAATAATCGTTATTTCTCTCTTCTC
AGACCTACTGAACGTGAACGAACAGAAAGGCTAATTAAAACCAAATTAAGGGAGAT**CATGATGC**
AGAAGGATTTGGAGAATATTACATCCAAAGAGATAAGAACAGAGTTGGAAATGCAAATGGTGTG
CAACTTGCGGGAATTCAAGGAATTTATAGACAATGAAATGATAGTGATCCTTGGTCAAATGGAT
AGCCCTACACAGATATTTGAGCATGTGTTCCCTGGGCTCAGAATGGAATGCCTCCAACCTTAGAGG
ACTTACAGAACCGAGGGGTACGGTATATCTTGAATGTCACTCGAGAGATAGATAACTTCTTCCC
AGGAGTCTTTGAGTATCATAACATTCGGGTATATGATGAAGAGGCAACGGATCTCCTGGCGTAC
TGGAATGACACTTACAAATTCATCTCTAAAGCAAAGAAACATGGATCTAAATGCCTTGTGCACT
GCAAATGGGGGTGAGTCGCTCAGCCTCCACCGTGATTGCCTATGCAATGAAGGAATATGGCTG
GAATCTGGACCGAGCCTATGACTATGTGAAAGAAAGACGAACGGTAACCAAGCCCAACCCAAGC
TTCATGAGACAACCTGGAAGAGTATCAGGGGATCTTGCTGGCAAGCTTCCTAGGCTTGATTCATG
GAGGGAGGGACAAGCCCTGGGGAGAGAAAAGCACAGAATTTGAGTCAGTAGATCTGGTTTCCAT
TCCTGGTTTCACCCTCTTGCTGCAACCCTGAGAAGTTACTTCACATTTCTCATCCTTACCTGACC
CCATCTATAAAAT**G**AAAATCAAGAGATCCATCTCACAGGGTTATTGTGAATAAAAATGTGTTTG
AATGTTTATAAAAAAAAAAAAAAAAAAAAAA

B DSP13 Alternate Splice Variant, 241 Amino Acids

MMQKDLENITSKEIRTELEMQMVNLRKFKEFIDNEMIVILGQMSPTQIFEHVFLGSEWNASN
LEDLQNRGVRYILNVTREIDNFFPGVFEYHNIRVYDEEATDLLAYWNDTYKFISKAKKHGSKCL
VHCKMGVSRSASTVIAYAMKEYGWNLDRAVDYVKERRTVTKPNPSFMRQLEEYQGILLASFLGL
IHGGRDKPWGEKSTEFESVDLVSIPGSPSCCNPEKLLHISHPYLTPSIK

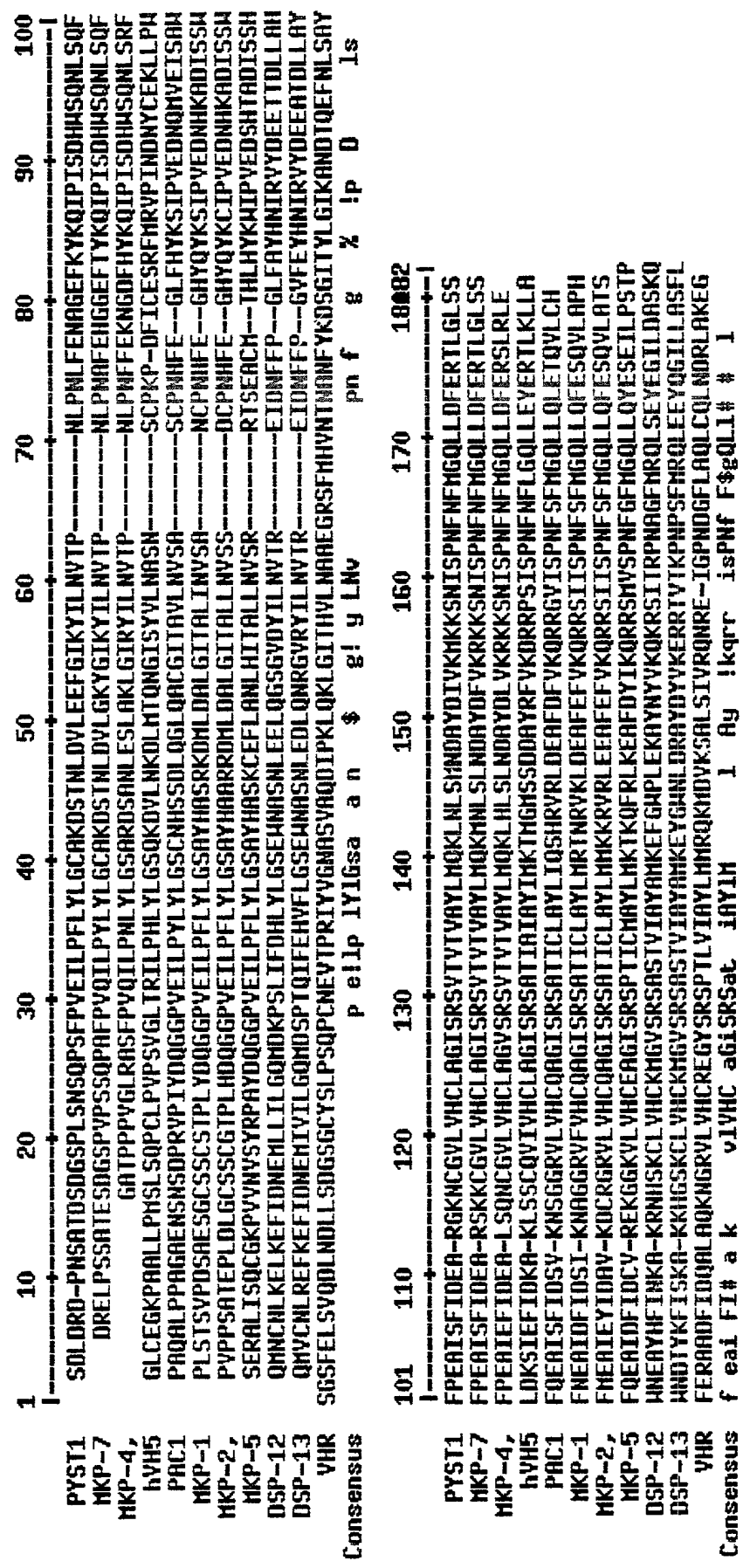


Figure 6

